



100-5

AF  
Irw

PTO/SB/21 (09-04)

Approved for use through 07/31/2006. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	10/775,653
Filing Date	February 10, 2004
First Named Inventor	Navarro, Steve
Art Unit	3683
Examiner Name	Nguyen, Xuan Lan T.
Attorney Docket Number	NAV-001

### ENCLOSURES (Check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement  <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers  <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address  <input type="checkbox"/> Terminal Disclaimer  <input type="checkbox"/> Request for Refund  <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC  <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences  <input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)  <input type="checkbox"/> Proprietary Information  <input type="checkbox"/> Status Letter  <input type="checkbox"/> Other Enclosure(s) (please identify below):
<div>Remarks</div>		

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Law Office of Timothy M. Barlow		
Signature			
Printed name	Timothy M. Barlow		
Date	August 1, 2005	Reg. No.	50018

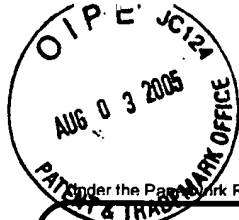
### CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature			
Typed or printed name	Timothy M. Barlow	Date	August 1, 2005

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



PTO/SB/17 (12-04v2)

Approved for use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Effective on 12/08/2004.

Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

# FEE TRANSMITTAL

## For FY 2005

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$)

250

**Complete if Known**

Application Number	10/775,653
Filing Date	February 10, 2004
First Named Inventor	Navarro, Steve
Examiner Name	Nguyen, Xuan Lan T.
Art Unit	3683
Attorney Docket No.	NAV-001

**METHOD OF PAYMENT (check all that apply)**☒ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): \_\_\_\_\_☐ Deposit Account Deposit Account Number: \_\_\_\_\_ Deposit Account Name: \_\_\_\_\_

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, **except for the filing fee**  
☐ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☐ Credit any overpayments**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**FEE CALCULATION****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

**2. EXCESS CLAIM FEES**

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180
<b>Total Claims</b>		
- 20 or HP = _____ x _____ = _____		
HP = highest number of total claims paid for, if greater than 20.		
<b>Indep. Claims</b>		
- 3 or HP = _____ x _____ = _____		
HP = highest number of independent claims paid for, if greater than 3.		
<b>Multiple Dependent Claims</b>		
Fee (\$)	Fee Paid (\$)	

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
- 100 = _____	/ 50 = _____	(round up to a whole number) x _____	= _____	

**4. OTHER FEE(S)**

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Appeal Brief, Small Entity

Fees Paid (\$)

250

**SUBMITTED BY**

Signature		Registration No. (Attorney/Agent) 50018	Telephone 703-864-7965
Name (Print/Type)	Timothy M. Barlow		Date August 1, 2005

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



PATENT APPLICATION

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

APPLICANT: Navarro, Steve

EXAMINER: Nguyen, Xuan Lan T.

SERIAL NO.: 10/775,653

ART GROUP: 3683

FILED: February 10, 2004

Case No.: NAV-001

ENTITLED: Self-Contained Brake and Remote Control System For A Trailer

I hereby certify that this correspondence is being deposited with the United States Postal Service  
as first-class mail in an envelope addressed to:

Mail Stop Appeal Brief-Patents

Commissioner for Patents

P.O. Box 1450


Alexandria, VA 22313-1450 on:

August 1, 2005

Date of Deposit

Timothy M. Barlow

Attorney of Record



Signature

08/04/2005 EFLORES 00000075 10775653

01 FC:2402

250.00 0P

**APPEAL BRIEF**

Mail Stop Appeal Brief-Patents

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

This is an appeal from the final rejection of claims 1-14 of the Office Action dated April 21, 2005. This application was filed on February 10, 2004. Appellant submits this Appeal Brief pursuant to 35 U.S.C. §134 and 37 C.F.R. § 1.191 in furtherance of the Notice of Appeal filed in this case on July 18, 2005. The required fee is enclosed as indicated in the accompanying Appeal Brief Transmittal Letter.

**I. Real Party In Interest**

The real party in interest is: Steve Navarro, the applicant, who is owner of U-Stor H2O, of Oakland, California.

**II. Related Appeals And Interferences**

There are no appeals or interferences related to the present appeal.

**III. Status Of Claims**

Claims 1-14 (see Appendix) are pending in this application. Claims 1-14 are rejected and are involved in this appeal.

**IV. Status Of Amendments**

There have been no amendments filed subsequent to the final rejection of April 21, 2005.

**V. Summary Of Claimed Subject Matter**

The device is a self-contained brake system for trailer operation. The system permits any truck with a trailer hitch to safely pull and stop a trailer without any coupling between the trailer and the towing vehicle except for the trailer hitch. Only the mechanical coupling of the hitch attaches the trailer to the truck. No hydraulic, pneumatic or electric power transfer is required between the truck and trailer. The system also allows the trailer to be pulled safely on a hazardous or unsafe work site by virtually any truck, bulldozer, grader, loader or other equipment with a compatible hitch, regardless of whether the vehicle has a Department of Transportation approved braking system, without risk to the operator or driver. See application Figure 1 and page 5, lines 13-20.

The applicant's system provides major advantages over the prior art: (1) a trailer, so equipped, can be safely pulled and stopped by any truck having a suitable standard fifth wheel hitch into which the trailer's kingpin can be latched, and (2) the system requires no special equipment or modification to the pulling vehicle. All the modifications are incorporated into the trailer.

The trailer braking system includes a fifth-wheel trailer hitch, an energy transfer mechanism, a brake actuator, and a power generator all attached to a trailer with brakes. See application page 6, lines 3-4.

The energy transfer mechanism includes a special hitch plate 64 with a slot 68 oriented fore and aft down through which a kingpin 66 protrudes to engage the towing vehicle's fifth-wheel. See Figure 4. The kingpin 66 is fixed to a sliding plate 46 immediately above and in contact with the hitch plate 64. A linkage 58 is attached between the sliding plate 46 and a brake actuator 60. See Figures 2 and 3. The brake actuator 60 is supplied with energy from the generator 70 to operate the trailer's brakes. See Figure 5. The brake actuator 60 meters energy to the brakes in response to the position of the sliding plate 46. See Figures 2 and 3.

In use, the hitch framework on the towing vehicle and the trailer are subject to a tremendous amount of force and energy due to dynamic trailer loads. The self-contained trailer brake system uses these forces to activate the trailer's braking system, eliminating the dependence on specialized towing vehicles with pneumatic, hydraulic, electric or cable-operated systems. As a result, virtually any vehicle with an appropriate hitch, such as a fifth-wheel or pintle hitch, can be a proper towing vehicle. See application page 6, lines 8-22.

By contrast, Examiner relies upon Pyle (US Patent 4653770). Pyle is significantly different from Applicant's device. Pyle's hitch is not compatible with any standard fifth-wheel hitch plates. Pyle has no kingpin and requires a complex articulated wrist assembly to join truck to hitch to trailer. See Pyle, Figures 6-9 and Column 1, lines 55-62.

The Applicant has manufactured and marketed trailers with his unique hitch system and is using them in his business. The Applicant has found that these trailers increase the flexibility of the truck and equipment owners and also increase cost-effectiveness, due to the above-mentioned advantages. The trailer is produced in different sizes and scaled to be appropriate for towing vehicles from pickup trucks to the largest construction equipment.

Thus, the Applicant's system has at least two distinct advantages over the prior art. First, any truck having a standard fifth-wheel hitch with a hitch plate can safely pull and stop a trailer having Applicant's system. Second, Applicant's system requires no special equipment or modification to the pulling vehicle.

**VI. Grounds Of Rejection To Be Reviewed On Appeal**

1. Whether claims 1, 4, 7, 10 and 11 are unpatentable over Pyle (4,653,770) under 35 U.S.C. 102(b).
2. Whether claims 2, 3, 5, 6, 8, 9, and 12-14 are unpatentable over Pyle and Applicant's admitted prior art under 35 U.S.C. 103(a).



## VII. Arguments

Claims 1-14 are presented in numerical order. Claims 1 and 12 are independent claims.

### CLAIM 1

Claim 1 is rejected under 35 U.S.C. 102(b) as being unpatentable over Pyle.

The Examiner states:

Re: claim 1, Pyle shows self-contained trailer braking system, as in the present invention, comprising: a fifth wheel hitch attached to a trailer frame, where the trailer hitch further comprises a kingpin 11 to engage a fifth wheel of a towing vehicle, as shown in figure 2; a sliding mechanism attached to the kingpin 11, where the sliding mechanism 16 is *slidingly captured within the trailer frame* and can move between a forward position and a rear position, as shown in figure 2, a spring 43 attached to the sliding mechanism and the trailer frame, where the spring biases the sliding member to the forward position, a brake actuator 41 mounted to the trailer frame and linked to the sliding mechanism; a brake assembly attached to the brake actuator, not illustrated but inherent; and a power supply 36 attached to the brake assembly, where power is applied to the brake assembly when the sliding mechanism is away from the forward position.

Applicant respectfully submits that the above-stated rejection is in error. The Examiner's cited reference is incomplete. Claim 1 discloses a sliding mechanism that is slidingly captured within the trailer frame. See Claim 1 and application page 12, lines 3-5.

Pyle's arrangement is clearly seen in Figures 6 and 7. Pyle's mechanism bridges the gap between truck and trailer, with some elements attached to one or the other. See Column 1, lines 55-62. Pyle does not teach a fifth wheel hitch that is within the trailer frame.

By contrast, Applicant's system is completely within the trailer frame, out of harm's way. See page 12, lines 3-5.

Further, Applicant's Claim 1 requires a kingpin *on the trailer* to engage a fifth wheel of a towing vehicle. This is a standard arrangement and is compatible with most, if not all, truck-mounted fifth wheels throughout the U.S. and elsewhere. See Claim 1 and page 7, lines 8-9.

Pyle discloses a kingpin 11 in Figure 9 and in Column 1, lines 55-62. However, Pyle's kingpin is mounted *on the towing vehicle*.

By contrast, Applicant's kingpin is permanently attached to the trailer. Claim 1 and page 7, lines 8-9. This is no trivial distinction. Applicant incorporated the kingpin into his trailer because it is a near-universal arrangement for heavy duty trailers in the United States. The Applicant manufactures, sells, rents and uses trailers which must be compatible with standard heavy duty trucking equipment. His customers are unwilling to buy or rent a system which requires a special proprietary truck fifth wheel that is not compatible with any of their other equipment. Applicant's system is successful in meeting the needs of his customers in the real world.

It is not certain whether Pyle's system is in use anywhere.

Claim 1 is allowable.

**CLAIM 2**

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pyle and Applicant's admitted prior art.

The Examiner states:

"Re: claims 2, 8 and 9, Pyle shows the energy to be hydraulic while the instant invention claims an internal combustion engine (note that internal combustion engines are normally present in construction vehicles and would have been available as a power supply to the brake system), a pneumatic energy and an electrical energy. Page 4 of the instant application admits that brake systems are normally operated with pneumatic, electric or hydraulic energy. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed one of the pneumatic, electric or hydraulic energy to operate the brake system; since all of these types of energies are old and well known and are readily available for use with a trailer brake system."

Applicant respectfully submits that the above-stated rejection is in error. The Examiner's cited reference is incomplete. Claim 2 discloses an internal combustion engine to power the brake assembly on the trailer. However, Applicant's internal combustion is attached to the trailer. See Figure 5 and application page 9, lines 3-5. This is the meaning of the "self-contained" feature of the self-contained braking system for trailers. See page 14, lines 8-14. Applicant's braking system does not require ANY power source other than that supplied on the trailer. Thus, this system is compatible with trucks that do not have a Federal DOT-approved braking system and cannot supply electric, hydraulic or pneumatic power to operate trailer brakes. See application page 16, lines 6-8.

Claim 2 is allowable.

**CLAIM 3**

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pyle and Applicant's admitted prior art.

The Examiner states:

"Re; claims 3, 5, and 6, the Examiner takes Official Notice that a torsion bar, a pneumatic spring and a leaf spring are art equivalences of a coil spring and would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed one of these springs as a biasing means since they are considered to be art equivalences and any of these types of springs would have accomplished the same biasing task."

Applicant respectfully submits that the above-stated rejection is in error. Claim 3 discloses a torsion bar to bias the sliding mechanism of the brake assembly on the trailer. However, that is not the sum total of what is claimed in Claim 3. Claim 3 is dependent from Claim 1. Thus, the torsion bar is used by the self-contained trailer braking system, that is enclosed within the trailer frame and which is compatible with virtually every fifth wheel hitch plate. See Claim 1 and application page 4, lines 14-17.

Claim 3 is allowable.

**CLAIM 4**

Claim 4 is rejected under 35 U.S.C. 102(b) as being unpatentable over Pyle.

The Examiner states:

"Re; claim 4, Pyle shows spring 43 to be a coil spring."

Applicant respectfully submits that the above-stated rejection is in error. Claim 4 discloses a coil spring to bias the sliding mechanism of the brake assembly on the trailer. However, that is not the sum total of what is claimed in Claim 4. Claim 4 is dependent from Claim 1. Thus, the coil spring is used by the self-contained trailer braking system, that is enclosed within the trailer frame and which is compatible with virtually every fifth wheel hitch plate. See Claim 1 and application page 4, lines 14-17.

Claim 4 is allowable.

**CLAIM 5**

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pyle and Applicant's admitted prior art.

The Examiner states:

“Re; claims 3, 5, and 6, the Examiner takes Official Notice that a torsion bar, a pneumatic spring and a leaf spring are art equivalences of a coil spring and would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed one of these springs as a biasing means since they are considered to be art equivalences and any of these types of springs would have accomplished the same biasing task.”

Applicant respectfully submits that the above-stated rejection is in error. Claim 5 discloses a pneumatic spring to bias the sliding mechanism of the brake assembly on the trailer. However, that is not the sum total of what is claimed in Claim 5. Claim 5 is dependent from Claim 1. Thus, the pneumatic spring is used by the self-contained trailer braking system, that is enclosed within the trailer frame and which is compatible with virtually every fifth wheel hitch plate. See Claim 1 and application page 4, lines 14-17. Claim 5 is allowable.

**CLAIM 6**

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pyle and Applicant's admitted prior art.

The Examiner states:

"Re; claims 3, 5, and 6, the Examiner takes Official Notice that a torsion bar, a pneumatic spring and a leaf spring are art equivalences of a coil spring and would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed one of these springs as a biasing means since they are considered to be art equivalences and any of these types of springs would have accomplished the same biasing task."

Applicant respectfully submits that the above-stated rejection is in error. Claim 6 discloses a leaf spring to bias the sliding mechanism of the brake assembly on the trailer. However, that is not the sum total of what is claimed in Claim 6. Claim 6 is dependent from Claim 1. Thus, the torsion bar is used by the self-contained trailer braking system, that is enclosed within the trailer frame and which is compatible with virtually every fifth wheel hitch plate. See Claim 1 and application page 4, lines 14-17. Claim 6 is allowable.

**CLAIM 7**

Claim 7 is rejected under 35 U.S.C. 102(b) as being unpatentable over Pyle.

The Examiner states:

"Re; claim 7, Pyle further shows the lock mechanism 56."

Applicant respectfully submits that the above-stated rejection is in error. Claim 7 discloses a lock mechanism to restrict movement of the sliding mechanism of the brake assembly on the trailer. However, that is not the sum total of what is claimed in Claim 7. Claim 7 is dependent from Claim 1. Thus, the lock mechanism is used by the self-contained trailer braking system, that is enclosed within the trailer frame and which is compatible with virtually every fifth wheel hitch plate. See Claim 1 and application page 4, lines 14-17. Claim 7 is allowable.

**CLAIM 8**

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pyle and Applicant's admitted prior art.

The Examiner states:

"Re: claims 2, 8 and 9, Pyle shows the energy to be hydraulic while the instant invention claims an internal combustion engine (note that internal combustion engines are normally present in construction vehicles and would have been available as a power supply to the brake system), a pneumatic energy and an electrical energy. Page 4 of the instant application admits that brake systems are normally operated with pneumatic, electric or hydraulic energy. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed one of the pneumatic, electric or hydraulic energy to operate the brake system; since all of these types of energies are old and well known and are readily available for use with a trailer brake system."

Applicant respectfully submits that the above-stated rejection is in error. Claim 8 discloses pneumatic power to operate the brake assembly on the trailer. However, that is not the sum total of what is claimed in Claim 8. Claim 8 is dependent from Claim 1. Thus, the pneumatic power is used by the self-contained trailer braking system, that is enclosed within the trailer frame and which is compatible with virtually every fifth wheel hitch plate. See Claim 1 and application page 4, lines 14-17.

In addition, the Examiner has equated hydraulic, pneumatic and electric brake systems. While each type of braking systems does ultimately provide braking force to the wheels of the trailer, each system is distinct, both mechanically *and legally*. Department of Transportation regulations provide for different weight categories for trucks, trailers and their braking systems. No known manufacturer makes hydraulic or electric brakes strong enough, mechanically and legally, to handle the weight of a fully loaded trailer behind a Class 8 truck. Electric brakes are not strong or reliable enough and hydraulic brake fluid is likely to boil under those loads. Thus, for the heaviest loads, only pneumatic brakes are appropriate. These trailers are scaled up or down to suit the needs of the user and the capability of the towing truck. See Application page 6, lines 20-22.

By contrast, Pyle is a hydraulic hitch only. See Pyle's Title "Hydraulic Hitch" and specification. Pyle makes no mention of the use of other types of energy for braking or of the additional equipment necessary, such as an air compressor for pneumatic brakes, to power other brake systems. Pyle has not addressed any issue except hydraulic brakes. Thus, Pyle is limited to relatively light loads. It is not appropriate to give Pyle additional, undisclosed properties and capabilities.

Claim 8 is allowable.



**CLAIM 9**

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pyle and Applicant's admitted prior art.

The Examiner states:

"Re: claims 2, 8 and 9, Pyle shows the energy to be hydraulic while the instant invention claims an internal combustion engine (note that internal combustion engines are normally present in construction vehicles and would have been available as a power supply to the brake system), a pneumatic energy and an electrical energy. Page 4 of the instant application admits that brake systems are normally operated with pneumatic, electric or hydraulic energy. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed one of the pneumatic, electric or hydraulic energy to operate the brake system; since all of these types of energies are old and well known and are readily available for use with a trailer brake system."

Applicant respectfully submits that the above-stated rejection is in error. Claim 9 discloses electric power to operate the brake assembly on the trailer. However, that is not the sum total of what is claimed in Claim 9. Claim 9 is dependent from Claim 1. Thus, the electric power is used by the self-contained trailer braking system, that is enclosed within the trailer frame and which is compatible with virtually every fifth wheel hitch plate. See Claim 1 and application page 4, lines 14-17.

Claim 9 is allowable.

**CLAIM 10**

Claim 10 is rejected under 35 U.S.C. 102(b) as being unpatentable over Pyle.

The Examiner states:

“Re; claim 10, Pyle shows hydraulic master cylinder36.”

Applicant respectfully submits that the above-stated rejection is in error. Claim 10 discloses a hydraulic power to operate the brake assembly on the trailer. However, that is not the sum total of what is claimed in Claim 10. Claim 10 is dependent from Claim 1. Thus, the hydraulic power is used by the self-contained trailer braking system, that is enclosed within the trailer frame and which is compatible with virtually every fifth wheel hitch plate. See Claim 1 and application page 4, lines 14-17.

Claim 10 is allowable.

**CLAIM 11**

Claim 11 is rejected under 35 U.S.C. 102(b) as being unpatentable over Pyle.

The Examiner states:

“Re; claim 11, Pyle shows shock absorber 26.”

Applicant respectfully submits that the above-stated rejection is in error. Claim 11 discloses a damper to moderate movement of the sliding mechanism of the brake assembly on the trailer. However, that is not the sum total of what is claimed in Claim 11. Claim 11 is dependent from Claim 1. Thus, the coil spring is used by the self-contained trailer braking system, that is enclosed within the trailer frame and which is compatible with virtually every fifth wheel hitch plate. See Claim 1 and application page 4, lines 14-17.

Claim 11 is allowable.

**CLAIM 12**

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pyle and Applicant's admitted prior art.

The Examiner states:

"Re; claim 12, Pyle shows self-contained braking system, as in the present invention, comprising: a fifth wheel hitch attached to a trailer frame, where the trailer hitch further comprises a kingpin 11 to engage a fifth wheel of a towing vehicle, as shown in figure 2; a sliding mechanism 16 attached to kingpin 11, where the sliding mechanism 16 is slidably captured within the trailer frame and can move between a forward position and a rear position, as shown in figure 2, a coil spring 43 attached to the sliding mechanism and the trailer frame, where the spring biases the sliding member to the forward position; a brake actuator, not illustrated but inherent; and a power generator 36 attached to the brake assembly, where hydraulic energy is applied to the brake assembly when the sliding mechanism is away from the forward position."

Applicant respectfully submits that the above-stated rejection is in error. The Examiner's cited reference is incomplete. Claim 12 discloses a sliding mechanism that is slidably captured within the trailer frame. See Figure 4 and Claim 12 and application page 12, lines 3-5.

Pyle's arrangement is clearly seen in Figures 6 and 7. Pyle's mechanism bridges the gap between truck and trailer, with some elements attached to one or the other. See Pyle, Column 1, lines 55-62. Pyle does not teach a fifth wheel hitch that is within the trailer frame.

By contrast, Applicant's system is completely within the trailer frame, out of harm's way. See page 12, lines 3-5.

Further, Applicant's Claim 1 requires a kingpin *on the trailer* to engage a fifth wheel of a towing vehicle. This is a standard arrangement and is compatible with most, if not all, truck-mounted fifth wheels throughout the U.S. and elsewhere. See Figure 4 and Claim 1 and page 7, lines 8-9.

Pyle discloses a kingpin 11 in Figure 9 and in Column 1, lines 55-62. However, Pyle's kingpin is mounted *on the towing vehicle*.

By contrast, Applicant's kingpin is permanently attached to the trailer. Figure 4 and Claim 1 and page 7, lines 8-9. This is no trivial distinction. Applicant incorporated the kingpin into his trailer because it is a near-universal arrangement for heavy duty trailers in the United States. The Applicant manufactures, sells, rents and uses trailers which must be compatible with standard heavy duty trucking equipment. His customers are unwilling to buy or rent a system which requires a special proprietary truck fifth wheel that is not compatible with any of their other equipment. Applicant's system is successful in meeting the needs of his customers in the real world.

It is not certain whether Pyle's system is in use anywhere.

In addition, Claim 12 discloses a power generator 70 to power the brake assembly on the trailer. See Figure 5. As stated in her response, the Examiner understands that Pyle uses the engine of the towing vehicle to create brake power. However, Applicant's internal combustion is attached to the trailer, not the truck. See Figure 5 and application page 9, lines 3-5.

This is why applicant's Self-Contained Braking System For Trailers is "self-contained." See page 14, lines 8-14. Applicant's braking system does not require ANY power source other than that supplied on the trailer. Thus, this system is compatible with trucks that do not have a Federal DOT-approved braking system and cannot supply electric, hydraulic or pneumatic power to operate trailer brakes. See application page 16, lines 6-8.

Claim 12 is allowable.

**CLAIM 13**

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pyle and Applicant's admitted prior art.

The Examiner states:

“Re; claims 13 and 14, Pyle shows shock absorbers 26 and lock mechanism 56.”

Applicant respectfully submits that the above-stated rejection is in error. Claim 13 discloses a damper to moderate the movement of the sliding mechanism of the brake assembly on the trailer. However, that is not the sum total of what is claimed in Claim 13. Claim 13 is dependent from Claim 12. Thus, the torsion bar is used by the self-contained trailer braking system, that is enclosed within the trailer frame and which is compatible with virtually every fifth wheel hitch plate. See Claim 12 and application page 4, lines 14-17.

Claim 13 is allowable.

**CLAIM 14**

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pyle and Applicant's admitted prior art.

The Examiner states:

"Re; claims 13 and 14, Pyle shows shock absorbers 26 and lock mechanism 56."

Applicant respectfully submits that the above-stated rejection is in error. Claim 14 discloses a lock mechanism to restrict movement of the sliding mechanism of the brake assembly on the trailer. However, that is not the sum total of what is claimed in Claim 14. Claim 14 is dependent from Claim 12. Thus, the lock mechanism is used by the self-contained trailer braking system, that is enclosed within the trailer frame and which is compatible with virtually every fifth wheel hitch plate. See Claim 12 and application page 4, lines 14-17.

Claim 14 is allowable.

The applicant's self-contained trailer braking system contains two main advantages over the Pyle: The hitch mechanism is completely contained within the trailer frame, and the hitch mechanism is completely compatible with existing fifth wheel hitches. In addition, when a power generator is required to supply brake energy, the power generator is attached to the trailer, eliminating the need for dedicated power couplings from the towing vehicle. The prior art cited by the Examiner does not disclose or suggest these features, nor does it contain each and every one of the elements of the applicant's system. Thus, claims 14, which were rejected under 35 U.S.C. 102(b) and 103(a) over Pyle, are allowable.

Respectfully submitted,

(Navarro)

By: 

Attorney for the Applicant

Timothy M. Barlow

Registration No. 50,018

Phone: (520) 529-4200



**VII. Claims Appendix**

1. (original) A self-contained trailer braking system comprising:
  - a fifth wheel hitch attached to a trailer frame, where the trailer hitch further comprises a kingpin to engage a fifth wheel of a towing vehicle;
  - a sliding mechanism attached to the kingpin, where the sliding mechanism is slidingly captured within the trailer frame and can move between a forward position and a rear position;
  - a spring attached to the sliding mechanism and the trailer frame, where the spring biases the sliding member to the forward position;
  - a brake actuator mounted to the trailer frame and linked to the sliding mechanism;
  - a brake assembly attached to the brake actuator; and
  - a power supply attached to the brake assembly, where power is applied to the brake assembly when the sliding mechanism is away from the forward position.
2. (original) The self-contained trailer braking system of claim 1, wherein the power supply is an internal combustion engine.
3. (original) The self-contained trailer braking system of claim 1, wherein the spring is a torsion bar.
4. (original) The self-contained trailer braking system of claim 1, wherein the spring is a coil spring.

5. (original) The self-contained trailer braking system of claim 1, wherein the spring is a pneumatic mechanism.
6. (original) The self-contained trailer braking system of claim 1, wherein the spring is a leaf spring.
7. (previously amended) The self-contained trailer braking system of claim 1, wherein the sliding mechanism is immobilized with a lock mechanism.
8. (original) The self-contained trailer braking system of claim 1, wherein the power supply furnishes pneumatic power.
9. (original) The self-contained trailer braking system of claim 1, wherein the power supply furnishes electric power.
10. (original) The self-contained trailer braking system of claim 1, wherein the power supply furnishes hydraulic power.
11. (original) The self-contained trailer braking system of claim 1, further comprising:  
a damper attached to the sliding mechanism and the trailer frame, where the damper resists rapid movement of the sliding member.



12. (original) A self-contained trailer braking system comprising:

a fifth wheel hitch attached to a trailer frame, where the trailer hitch further comprises a kingpin to engage a fifth wheel of a towing vehicle;

a sliding mechanism attached to the kingpin, where the sliding mechanism is slidingly captured within the trailer frame and can move between a forward position and a rear position;

a coil spring attached to the sliding mechanism and the trailer frame, where the coil spring biases the sliding member to the forward position;

a brake actuator mounted to the trailer frame and linked to the sliding mechanism;

a brake assembly attached to the brake actuator; and

a power generator attached to the brake assembly, wherein the power generator supplies pneumatic energy for the brake assembly, wherein power is applied to the brake assembly when the sliding mechanism is away from the forward position.

13. (original) The self-contained trailer braking system of claim 12, further comprising:

a damper attached to the sliding mechanism and the trailer frame, where the damper resists rapid movement of the sliding member.

14. (previously amended) The self-contained trailer braking system of claim 12, wherein the sliding mechanism is deactivated with a lock mechanism.

IX. Evidence Appendix

Not Applicable.

X. Related Proceedings Appendix

Not Applicable.